

Claims

What is claimed is:

1. A method of making a yeast enhanced steep-water, the method comprising incubating steep-water at a temperature of from about 25°C to about 45 °C under aerobic conditions to produce a yeast enhanced steep-water that comprises at least 70% yeast on a microbial dry weight basis.
2. The method according to claim 1, further comprising adding one or more exogenous yeast to the steep-water.
3. The method according to claim 2, wherein the one or more exogenous yeast are selected from the group consisting of *Saccharomyces cerevisiae*, *Candida utilis*, *Kluyveromyces marxianus* and *Torulaspora delbruekii*.
4. The method according to claim 1, wherein the yeast is incubated at a pH of less than 6.0.
5. The method according to claim 1, further comprising removing at least a portion of phytate from the steep-water.
6. The product produced by the method of anyone of claims 1-5.
7. The product of claim 6, wherein the product additionally comprises at least 7-g/L acetate.
8. The product of claim 6, wherein the product additionally comprises at least 1 µg/g biotin on a dry solid basis.
9. The method according to claim 1, further comprising drying the yeast enhanced steep-water.
10. The method according to claim 1, further comprising lysing the yeast.
11. The method according to claim 10, wherein the yeast are lysed by incubating the yeast enhanced steep-water at a pH of from about 4.7 to 5.2 and at a temperature of from about 42°C to about 48°C.
12. The method according to claim 1 further comprising drying the steep-water.

13. A method of making an amino acid enhanced steep-water, the method comprising incubating steep-water at a temperature less than 45 °C under anaerobic conditions to produce an amino acid enhanced steep-water that comprises a free amino nitrogen to total nitrogen concentration of greater than 20%.
- 5 14. The method according to claim 13 wherein the steep-water is maintained at a pH of from about 4.5 to about 5.5.
15. The method according to claim 13, further comprising adding one or more exogenous microorganisms to the steep-water.
- 10 16. The method according to claim 15, wherein the one or more exogenous microorganisms are selected from the group consisting of *Bacillus subtilis*, *Bacillus amyloliquefaciens*, *Apergillus niger*, and *Aspergillus oryzae*.
17. The method according to claim 13, further comprising removing at least a portion of phytate from the steep-water.
- 15 18. The method according to claim 13, further comprising drying the amino acid enhanced steep-water.
19. The product produced by the method of anyone of claims 13-18.
20. A method of making a lactate enhanced steep-water, the method comprising incubating steep-water at a temperature from about 36°C to about 55°C under anaerobic conditions to produce a lactate enhanced steep-water comprising a lactate concentration of at least 180 g/Kg of steep-water solid.
- 20 21. The method according to claim 20, wherein the steep-water is maintained at a pH of from about 4.5 to about 6.0 during the incubation.
22. The method according to claim 20, further comprising adding one or more exogenous microorganisms to the steep-water.
- 25 23. The method according to claim 22, wherein the one or more exogenous microorganisms are selected from the group consisting of *Lactobcillus spp.*, *Lactococcus spp.*, *Leuconostoc spp.* and *Bacillus coagulans*.
24. The method according to claim 20, further comprising removing at least a portion of phytate from the steep-water.

25. The method according to claim 20, further comprising drying the amino acid enhanced steep-water.

26. The product produced by anyone of claims 20-25.